

Claims:

What is claimed is:

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1. A system having first and second processes residing on first and second computers used with backup or restore operations, wherein said first and said second computers are in communication with a data storage system on a network, said system comprising:

at least one first communication mechanism residing on both said first and second computers for facilitating communications between said first and second processes over said network;

a second communication mechanism residing on both said first and second computers for facilitating communication between said first and second processes through said data storage system; and

means, within said first and second processes, for allowing said first and second processes to determine whether a call from said first and second processes is for first or second communication mechanism.

2. The system of claim 1, wherein said first and second processes are part of a backup or restore process.

1 3. The system of claim 2, wherein said at least one first communication mechanism is
2 a network socket.

1 4. The system of claim 3, wherein said second communication mechanism is a data
2 storage system socket, and said data storage system socket allows information to be
3 transferred from said first process to said second process through said data storage
4 system.

1 5. The system of claim 1, wherein said backup and restore operations are capable of
2 backing up and restoring information from file system or database applications.

1 6. A method for assisting with backup and restore operations in a computer system,
2 the method comprising the steps of:

3 (a) establishing at least one first connection over a network, between first and
4 second processes residing on different computers; and

5 (b) establishing, in parallel with establishing said at least one first connection, a
6 second connection, through a data storage system, between said first and said second
7 processes.

1 7. The method of claim 6, wherein step (a) comprises the step of:
2 creating a pair of communication mechanisms on a designated port.

1 8. The method of claim 7, wherein step (a) further comprises the steps of:
2 requesting with one member of said communication mechanism pair a connection
3 to said other member of said communication mechanism pair; and
4 in response to said connection request, accepting said connection request.

1 9. The method of claim 8, wherein step (a) further comprises the step of:
2 creating a second pair of communication mechanisms on the designated port,
3 wherein said second pair of communication mechanisms is used for transferring a different
4 type of information than would be transferred over said first pair of communication
5 mechanisms.

1 10. The method of claim 9, wherein step (a) further comprises the steps of:
2 requesting with one member of said second pair of communication mechanisms, a
3 connection to said other member of said second pair of communication mechanisms; and
4 in response to said connection request, accepting said connection request.

1 11. The method of claim 6, wherein step (b) comprises the steps of:
2 creating a third pair of communication mechanisms on a second designated port.

1 12. The method of claim 11, wherein step (b) further comprises the steps of:
2 requesting with one member of said third pair of communications mechanisms a
3 connection to said other member of said second pair of communications mechanisms; and
4 in response to said connection request, accepting said connection request.

13. The method of claim 12, wherein step (b) further comprises the steps of:
receiving information about a group of resources in said data storage system;
in response to receiving information about said group of resources, creating a
fourth pair of communication mechanisms on a dynamically allocated port; and
connecting said fourth pair of communication mechanisms to each other through
said data storage system.

14. The method of claim 6, wherein said backup and restore operations are for backing
up and restoring information from a file system application.

15. A method for assisting with backup and restore operations in a computer system,
the method comprising:
establishing a connection, over a network, between a first process and a second
process residing on different computers;
receiving information about a dynamically allocated port over the established
connection;
establishing a second connection over the network, on the dynamically allocated
port, between said first and second processes;
identifying resources on a data storage devices to be used in order to transfer
information through said data storage device; and
establishing a connection between said first and second processes through said
data storage system.

